

REMARKS / DISCUSSION OF ISSUES

Claims 1,2,4,5,8-12 and 14-16 are pending in the application. An amendment is made to claim 1 to ensure grammatical consistency and is not made in view of the applied art.

Rejections under 35 U.S.C. § 103

Claims 1,2,5,8,9, 11,12 and 14-16 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Nishigaki, et al.* (US Patent 6,310,589) in view of *Yamazaki, et al.* (US Patent Application Publication 2002/0005696) and *Tam, et al.* (US Patent Application Publication 2003/0117082).

Claims 4 and 10 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Nishigaki, et al.* in view of *Yamazaki, et al.*, *Tam, et al.* and Inoue (US Patent 6,469,455).

For at least the reasons set forth below, Applicants respectfully submit that a *prima facie* case of obviousness has not been established.

A *prima facie* case of obviousness has three requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, requires some reason that the skilled artisan would modify a reference or to combine references.¹ The Supreme Court has, however, cautioned against the use of “rigid and mandatory formulas” particularly with regards to finding reasons prompting a person of ordinary skill in the art to combine elements in the way the claimed new invention does.² But rather the Supreme Court suggests a broad, flexible “functional approach” to the obviousness analysis recognizing that “[i]n many fields it may be that

¹ See *Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*, 411 F.3d 1332 (Fed. Cir. 2005) (“[S]imply identifying all of the elements in a claim in the prior art does not render a claim obvious.”).

² See *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007) (“The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents.”).

there is little discussion of obvious techniques or combinations.”³ Second, the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the same time the invention was made. In other words, a hindsight analysis is not allowed.⁴ Lastly, the prior art reference or combination of references must teach or suggest all the limitations of the claims.⁵

i. Claims 1, 9 and 12

a. The applied art fails to disclose at least one feature of claim 1

Claim 1 is directed to a display device and features:

*“...an output is directly connected via a **first switch** to a controlling connection of the driving transistor and wherein the second input is connected to a **second switch** for allowing a control charge on a capacitor connected to the second input to control the amplifier for maintaining a current provided to the picture element during a hold period after selection of the picture element.”*

In rejecting claims 1, 9 and 12, the Office Action concedes that *Nishigaki, et al.* fails to disclose, inter alia a first switch to a controlling connection of the driving transistor, and directs Applicants to Fig. 23 and paragraph [0403] of *Yamazaki, et al.* To wit, the Office Action states:

³Id. See also Id. at 1743 F. 3d 1356 (Fed. Cir. 2006) (“Our suggestion test is in actuality quite flexible and not only permits, but *requires*, consideration of common knowledge and common sense”) (emphasis in original).

⁴ See *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200 (Fed. Cir. 1991) (“Hindsight is not a justifiable basis on which to find that ultimate achievement of a long sought and difficult scientific goal was obvious.”).

⁵ See *In re Wilson*, 424 F.2d 1382 (C.C.P.A. 1970) (“All words in a claim must be considered in judging the patentability of that claim against the prior art.”).

“As disclosed in Figure 23, the amplifier 706 has a negative terminal (read as first current path) and a positive terminal (read as second current path). Furthermore, it is disclosed in Figure 23 that the output of the amplifier is connected directly to transistor 708, which leads to EL element 703. The circuit mirrors Applicant’s Figures 5 and 6. As for the output of the amplifier 706 it is directly driving TFT 708, which is before the EL element 703, so as to control the results of the amplifier.”

At the outset, Applicants respectfully demur the contention that the circuit of Fig. 23 ‘mirrors’ Figs. 5 and 6 of the filed application. Notable is the fact that Figs. 5 and 6 do not mirror one another. More notable is that Fig. 23, which are shown in Figs. 5 and 6 of the filed application, fails to disclose certain features set forth in claim 1.

As set forth the filed application in an embodiment described in connection with Fig. 5, for example, an output of control amplifier 25 is connected directly to transistor 19 via switch 25.

By contrast, the amplifier 706 does not disclose a *switch to a controlling connection of a driving transistor*; rather the output of amplifier 706 is connected to EL element 703. Applicants direct attention to paragraphs [0403] through [0406] of Yamazaki, et al. for support for their contention that the applied art fails to disclose at least one feature of claim 1:

[0402] The output of the temperature compensation circuit 701 is connected to a power supply line 705, which gives an electric potential to a pixel electrode of an EL element (not shown) in a pixel through the source-drain of a driving TFT (not shown).

[0403] The constant current generator 704 is composed of an amplifier 706, a variable resistor 707 and a transistor 708.

[0404] The transistor 708 is a p-channel TFT in the description given in this embodiment but the transistor is not limited thereto. The polarity of this transistor may be of an n-channel TFT or of a p-channel TFT. Alternatively, the transistor may be a bipolar transistor.

[0405] The transistor 708 has a source region connected to an inversion input terminal (-) of the amplifier 706 and to the variable resistor 707, and has a drain region connected to an output terminal of the constant current generator 704. A gate electrode of the transistor 708 is connected to an output terminal of the amplifier 706.

[0406] A constant voltage V2 is inputted to a non-inversion terminal (+) of the amplifier 706.

[0407] The amplifier 706, the variable resistor 707 and the transistor 708 that constitute

the constant current generator may be formed on an IC chip or on the same substrate which has an insulating surface and on which pixels are formed.

Clearly, the current source 704 provides current to EL element 703. As described in the applied art, the circuit of Fig. 23 provides a constant current if the temperature of the surrounding area of a display changes. However, there is no disclosure of a switch between an output of a display driver and a controlling connection of a driving transistor.

For at least the reasons set forth above, Applicants respectfully submit that the applied art fails to disclose at least a first switch as specifically recited in claim 1. Therefore, a *prima facie* case of obviousness has not been established and claim 1 is patentable over the applied art. Moreover, claims 2,4,5, 8, 14 and 15, which depend from claim 1 immediately or ultimately, are patentable for at least the same reasons.

b. The applied art fails to disclose at least one feature of claim 9

Claim 9 features:

“...an output of the control amplifier being directly connected via a first switch to a controlling connection of the driving transistor...”

In addressing these features of claim 9, the Office Action rejects claim 9 based on the same art and in the same way as in the rejection of claim 1. Accordingly, and for at least the reasons set forth above in the traversal of the rejection of claim 1, Applicants respectfully submit that the applied art fails to disclose at least one feature of claim 9. Therefore, a *prima facie* case of obviousness has not been established and claim 9 is patentable over the applied art. Moreover, claims 10-12 and 16, which depend from claim 9 immediately or ultimately, are patentable for at least the same reasons.

c. The applied art fails to disclose at least one feature of claim 12

Claim 12 features:

“...a control amplifier having an **output directly coupled via a first switch to the driving transistor...**”

In addressing these features of claim 12, the Office Action rejects claim 12 based on the same art and in the same way as in the rejection of claim 1. Accordingly, and for at least the reasons set forth above in the traversal of the rejection of claim 1, Applicants respectfully submit that the applied art fails to disclose at least one feature of claim 12. Therefore, a *prima facie* case of obviousness has not been established and claim 12 is patentable over the applied art. Moreover, claim 14, which depends from claim 12, is patentable for at least the same reasons.

ii. The combination of reference is improper

It is established that if there is no suggestion to combine the teachings of the applied art, other than the use of Applicants’ invention as a template for its own reconstruction, a rejection for obviousness is improper.⁶ In furtherance to the need for the suggestion to combine the teachings of the applied art, it is established that rejections on obviousness grounds cannot be sustained by mere conclusory statements: instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.⁷

Applicants respectfully submit that the Examiner has cobbled a rejection from the applied art using Applicants’ claims as templates for their own reconstruction. Notably, clearly articulated bases for transplanting features of one of the applied references into another are missing. For example, in rejecting claims 1, 9 and 12, the Office Action states:

“Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to integrate the switch as taught by Tam with Nishigaki’s circuit, as modified by Yamazaki, with the motivation that is common to use such switches to control on/off application of key components in the circuitry.”

⁶ *Ex parte Crawford, et al.* Appeal 20062429, May 30, 2007.

⁷ *KSR Int’l v. Teleflex*, 127 S. Ct. at 1741.

At the outset, and for reasons set forth above, while *Yamazaki, et al.* does describe TFT switches in certain applications, in the portion of *Yamazaki, et al.* relied upon in the rejection of claims 1, 9 and 12, there is no disclosure of or the disclosed need for switches. Therefore, the transplanting of switches in a circuit used to control an electroluminescent device as described in *Yamazaki, et al.* would not be advised based on the portions of *Yamazaki, et al.*, but rather only through the application of hindsight analysis with the present claims as templates for their own reconstruction.

Secondly, the assertion that it is common to use such switches to control circuit components is a conclusory statement, and not a basis for combination of art. There must be a reason why the modification of one reference by another would have been within the purview of one of ordinary skill in the art at the time of Applicants' invention in order for the references to be properly combined. As noted, *Yamazaki, et al.* seeks no such switching capability in the circuit of Fig. 23, and does not mention their need.

Accordingly, and for at least the reasons set forth above, Applicants respectfully submit that the combination of references is improper. As such, a *prima facie* case of obviousness has not been established in connection with the pending claims, rendering these claims patentable over the applied art.

iii. General Comments on Rejections of Dependent Claims

Since each of the dependent claims depends from a base claim that is believed to be in condition for allowance, Applicant believes that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. Applicant does not, however, necessarily concur with the interpretation of any dependent claim as set forth in the Office Action, nor do Applicant concurs that the basis for the rejection of any dependent claim is proper. Therefore, Applicant reserves the right to specifically address the patentability of the dependent claims in the future, if deemed necessary.

Conclusion

In view of the foregoing, applicant(s) respectfully request(s) that the Examiner withdraw the objection(s) and/or rejection(s) of record, allow all the pending claims, and find the application in condition for allowance.

If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted on behalf of:
Phillips Electronics North America Corp.

/William S. Francos/
by: William S. Francos (Reg. No. 38,456)
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Volentine & Whitt, PLLC
Two Meridian Blvd.
Wyomissing, PA 19610
(610) 375-3513 (v)
(610) 375-3277 (f)